ACCREDITED
CERTIFICATE #5473.01

Test Report No.:
FCC2024-0030-RF

TEST REPORT

FCC ID	:	2BG9T-TCLCAMB1
Applicant	:	Shenzhen TCL Smart Home Technology Co., Ltd.
Product Name	:	Security Camera
Model No.	:	TCL Cam B1,TCL Cam ********(* is any character such as 0-9, A-Z, a-z, -,+, or space)

CVC Testing Technology Co., Ltd.

Applicant	**Name:** Shenzhen TCL Smart Home Technology Co., Ltd. **Address:** 7/F, TCL G1 Building. TCL International E City, No.1001 ZhongshanYuan Road, Nanshan District.Shenzhen
Manufacturer	**Name:** Shenzhen TCL Smart Home Technology Co., Ltd. **Address:** 7/F,TCL G1 Building. TCL International E City, No.1001 ZhongshanYuan Road, Nanshan District.Shenzhen
Factory	**Name:** Dongguan Lingdu Electronic Technology Co.,Ltd **Address:** N0.1, Longcheng Street, Qingxi Town, Dongguan City, Guangdong Province, China
Equipment Under Test	**Product Name :** Security Camera **Model No. :** TCL Cam B1 **Trade mark :** TCL **Serial no.** : / **Sampling :** 1-1

Date of Receipt.	2024.6.27	Date of Testing	2024.7.19

Test Specification	**Test Result**
FCC CFR47 Part 15C Radio Frequency Devices ANSI C63.10-2020/Cor1-2023 KDB 558074 D01 15.247 Meas Guidance v05r02	PASS

Evaluation of Test Result	The equipment under test was found to comply with the requirements of the standards applied. **Seal of CVC** **Issue Date: 2024.7.24**

Approved by:	Reviewed by:	Tested by:
Chen Huawen	**Xu Zhenfei**	**Lu Weiji**

Other Aspects: NONE.

Abbreviations:OK, Pass= passed Fail = failed N/A= not applicable EUT= equipment, sample(s) under tested

Note: This test report relates only to the EUT, and shall not be reproduced except in full, without written approval of **CVC**.

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1. General Product Information

1.1 General information

Product Name	Security Camera
Model No.	TCL Cam B1
Additional model	TCL Cam ********(* is any character such as 0-9, A-Z, a-z, -,+, or space)
Power Supply	DC 5V, 1A
Serial Number(SN)	/
firmware	V3.0
software	v1.4.4
specific power settings	Bluetooth(LE_1M): 0 IEEE 802.11b: 50 IEEE 802.11g: 50 IEEE 802.11n(20MHz): 50
Antenna Type	Internal antenna
Antenna Connector	A detachable antenna
Antenna Gain	WIFI: 3.26dBi(provided by client) Bluetooth: 3.26dBi(provided by client)
Beamforming gain	Unsupported (provided by client)
Frequency Range	Bluetooth(LE_1M,): 2402~2480MHz IEEE 802.11b/g/n(20MHz): 2412~2462MHz
Channel Number	Bluetooth(LE_1M):40Channels IEEE 802.11b/g/n(20MHz): 11Channels
Type of Modulation	Bluetooth(LE_1M): GFSK IEEE 802.11b: DSSS(CCK, DQPSK, DBPSK); IEEE 802.11g: OFDM(64QAM, 16QAM, QPSK, BPSK); IEEE 802.11n(HT20): OFDM(64QAM, 16QAM, QPSK, BPSK);
Max. Conducted Power	Bluetooth(LE_1M): 21.39dBm IEEE 802.11b: 15.08dBm IEEE 802.11g: 19.34dBm IEEE 802.11n(20MHz): 19.38dBm
Operate Temp.Range	-20~75℃
Note： The product series model rule is TCL Cam ********, (* is any character such as 0-9, A-Z, a-z, -,+, or space). Declare that the circuit, PCB layout, electrical components, and RF performance of the following products are the same as the basic model, but there are slight changes in the appearance, color, size, etc. of the products. All the tests carried out on model TCL Cam B1.	

2. Test Sites

2.1 Test Facilities

The tests and measurements refer to this report were performed by RF testing Lab. of CVC Testing Technology Co., Ltd.

Add.: No.3, Tiantaiyi Road, Kaitai Avenue, Science City, Guangzhou,Guangdong,510663, People's Republic of China

Telephone : +86-20-32293888

Fax : +86-20-32293889

FCC(Test firm designation number：CN1282)

2.2 Description of Non-standard Method and Deviations

The testing and measurement methods used in this report are applied by all standard methods. Not any non-standard method or deviation from the used standards was used.

2.3 List of Test and Measurement Instruments

Refer to **Appendix X**.

3. Test Configuration

3.1 Test Mode

The EUT has been associated with peripherals and configuration operated in a manner tended to maximize its emission characteristics in a typical application.

Test Mode	Antenna Delivery	Test Channel
Bluetooth(LE_1M)	1TX / 1RX	0,19,39
IEEE 802.11b	1TX / 1RX	1,6,11
IEEE 802.11g	1TX / 1RX	1,6,11
IEEE 802.11n 20 SISO	1TX / 1RX	1,6,11

The radiated emission was measured in the following position: EUT stand-up position (Z axis), lie-down position (X, Y axis). The worst emission was found in lie-down position (X axis) and the worst case was recorded.

In order to find the worst case condition, Pre-tests are needed at the presence of different data rate and different channels. Preliminary tests have been done on all the configurations for confirming worst case. Data rate below means worst-case rate of each test item.

Worst-case data rates and channels are shown as following table.

Test Mode	Data Rate		
	Antenna 1	Antenna 2	MIMO
Bluetooth(LE_1M)	1	/	/
IEEE 802.11b	1	/	/
IEEE 802.11g	6	/	/
IEEE 802.11n 2.4GHz 20MHz	MCS 0	/	/

Test Items	Test Antennas	Test Modes	Test Channels
Conducted Emissions	Antenna 1	N/A	N/A
Radiated Emissions	Antenna 1	IEEE 802.11n 20 Bluetooth(LE_1M)	1,6,11/ 0,19,39
Radiated Emissions (Band Edge)	Antenna 1	IEEE 802.11n 20 Bluetooth(LE_1M)	1,11/ 0,39
Maximum conducted output power	Antenna 1	Bluetooth(LE_1M)/ IEEE 802.11b/ IEEE 802.11g/ IEEE 802.11n 20/	0,19,39/ 1,6,11/ 1,6,11/ 1,6,11/
Minimum 6 dB bandwidth	Antenna 1	Bluetooth(LE_1M)/ IEEE 802.11b/ IEEE 802.11g/ IEEE 802.11n 20/	0,19,39/ 1,6,11/ 1,6,11/ 1,6,11/
Occupied Channel Bandwidth	Antenna 1	Bluetooth(LE_1M)/ IEEE 802.11b/ IEEE 802.11g/ IEEE 802.11n 20/	0,19,39/ 1,6,11/ 1,6,11/ 1,6,11/
Band Edge Measurement	Antenna 1	Bluetooth(LE_1M)/ IEEE 802.11b/ IEEE 802.11g/ IEEE 802.11n 20/	0,19,39/ 1,6,11/ 1,6,11/ 1,6,11/
Maximum Power spectral density	Antenna 1	Bluetooth(LE_1M)/ IEEE 802.11b/ IEEE 802.11g/ IEEE 802.11n 20/	0,19,39/ 1,6,11/ 1,6,11/ 1,6,11/
Spurious RF Conducted Emissions	Antenna 1	Bluetooth(LE_1M)/ IEEE 802.11b/ IEEE 802.11g/ IEEE 802.11n 20/	0,19,39/ 1,6,11/ 1,6,11/ 1,6,11/

3.2 Duty cycle

TestMode	Antenna	Channel	Transmission Duration [ms]	Transmission Period [ms]	Duty Cycle [%]	Limit	Verdict
11B	Ant1	2412	8.40	19.73	42.57	---	---
		2437	8.37	16.69	50.15	---	---
		2462	8.38	16.69	50.21	---	---
11G	Ant1	2412	2.02	4.04	50.00	---	---
		2437	2.03	4.05	50.12	---	---
		2462	2.02	4.04	50.00	---	---
11N20SISO	Ant1	2412	1.89	3.75	50.40	---	---
		2437	1.89	3.71	50.94	---	---
		2462	1.89	3.71	50.94	---	---
BLE_1M	Ant1	2402	2.08	2.51	82.87	---	---
		2440	2.08	2.51	82.87	---	---
		2480	2.08	2.51	82.87	---	---

4. Summary of measurement results

Summary of measurements of results	Clause in FCC rules	Verdict	Note
Conducted Emissions	15.207	N/A	See note 2
Radiated Emissions	15.247(d),15.205,15.209	PASS	/
Maximum conducted output power	15.247(b)(3)	PASS	Appendix C of WIFI2.4G_ diagram and Appendix C of BLE_ diagram
Minimum 6 dB bandwidth	15.247(a)(2)	PASS	Appendix A of WIFI2.4G_ diagram and Appendix A of BLE_ diagram
Occupied Channel Bandwidth	15.247(a)(2)	PASS	Appendix B of WIFI2.4G_ diagram and Appendix B of BLE_ diagram
Band Edge Measurement	15.247(d)	PASS	Appendix E of WIFI2.4G_ diagram and Appendix E of BLE_ diagram
Maximum Power spectral density	15.247(e)	PASS	Appendix D of WIFI2.4G_ diagram and Appendix D of BLE_ diagram
Spurious RF Conducted Emissions	15.247(d)	PASS	Appendix F of WIFI2.4G_ diagram and Appendix F of BLE_ diagram
Antenna Requirement	15.203	PASS	See note 1

Note 1: According to 15.203, it is considered sufficient to comply with the provisions of this section.
Note 2: Not applicable to battery powered devices.

5. Measurement procedure

5.1 Conducted Emission

Ambient condition:

Temperature	Relative humidity	Pressure
23°C ~25°C	45%~50%	101.2kPa

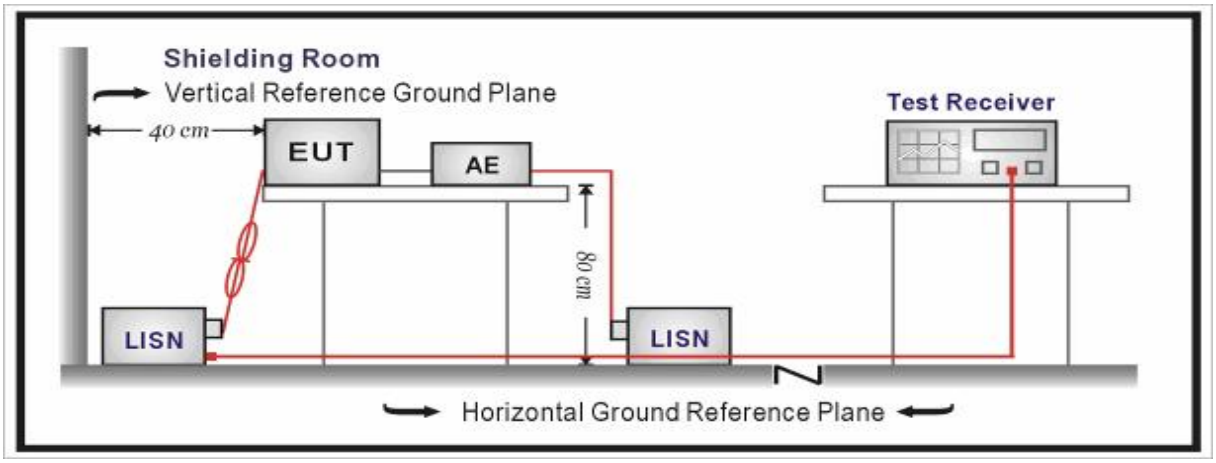
Method of Measurement:

The EUT was setup according to ANSI C63.10-2020/Cor1-2023 for compliance to FCC 47CFR 15.247 requirements. The EUT was placed on a platform of nominal size, 1 m by 1.5 m, raised 80 cm above the conducting ground plane. The vertical conducting plane was located 40 cm to the rear of the EUT. All other surfaces of EUT were at least 80 cm from any other grounded conducting surface. The EUT and simulators are connected to the main power through a line impedance stabilization network (LISN). The LISN provides a 50 ohm /50uH coupling impedance for the measuring equipment. The peripheral devices are also connected to the main power through a LISN. (Please refer to the block diagram of the test setup and photographs) Each current-carrying conductor of the EUT power cord, except the ground (safety) conductor, was individually connected through a LISN to the input power source.
The excess length of the power cord between the EUT and the LISN receptacle were folded back and forth at the center of the lead to form a bundle not exceeding 40 cm in length.
Conducted emissions were investigated over the frequency range from 0.15MHz to 30MHz using a receiver bandwidth of 9 kHz.

Limits:

Frequency (MHz)	Conducted Limits(dBμV)	
	Quasi-peak	Average
0.15 - 0.5	66 to 56 *	56 to 46*
0.5 - 5	56	46
5 - 30	60	50
Note 1: The lower limit shall apply at the transition frequencies. Note 2: The limit decreases linearly with the logarithm of the frequency in the range 0.15 MHz to 0.5 MHz.		

Test Setup:



Measurement Data

An initial pre-scan was performed on the live and neutral lines with peak detector.

Quasi-Peak and Average measurement were performed at the frequencies with maximized peak emission were detected.

Notes:

1. *The following Quasi-Peak and Average measurements were performed on the EUT:*
2. *Final Level =Reading + Factor.*

Measurement Uncertainty：

The assessed measurement uncertainty to ensure 95% confidence level for the normal distribution is with the coverage factor k = 1.96. U= 3.12 dB.

Test Results:

Conducted Emission applies to an intentional radiator that is designed to be connected to the public utility (AC) power line. Measurements to demonstrate compliance with the conducted limits are not required for devices which only employ battery power for operation and which do not operate from the AC power lines or contain provisions for operation while connected to the AC power lines.

5.2 Radiated Emission

Ambient condition:

Temperature	Relative humidity	Pressure
23°C ~25°C	45%~50%	101.2kPa

Method of Measurement:

The EUT was setup and tested according to ANSI C63.10-2020/Cor1-2023.

The EUT is placed on a turn table which is 1.5 meter above ground. The turn table is rotated 360 degrees to determine the position of the maximum emission level. The EUT was positioned such that the distance from Antenna to the EUT was 3 meters.

The Antenna is scanned from 1 meter to 4 meters to find out the maximum emission level. This is repeated for both horizontal and vertical polarization of the Antenna. In order to find the maximum emission, all of the interface cables were manipulated according to ANSI C63.10:2013 on radiated measurement.

The resolution bandwidth below 1GHz setting on the field strength meter is 120 kHz and above 1GHz is 1MHz.

The frequency range from 30MHz to 10th harmonic is checked.

Note: When doing emission measurement above 1GHz, the horn Antenna will be bended down a little (as horn Antenna has the narrow beamwidth) in order to keeping the Antenna in the “cone of radiation” of EUT. The 3dB beamwidth is 10~60 degrees for H-plane and 10~90 degrees for E-plane.

Limits:

Radiated emissions which fall in the restricted bands, as defined in Section 15.205(a) of FCC part 15, must also comply with the radiated emission limits specified in Section 15.209(a) (see Section 15.205(c)).

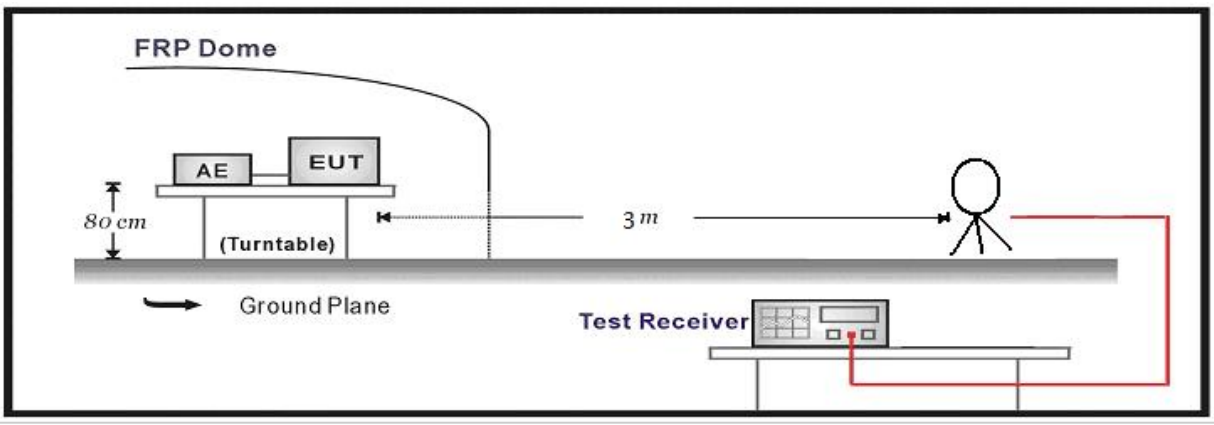
Frequency	Limit (μV/m)	Limit (dBμV/m @3m)	Remark
0.009MHz-0.490MHz	2400/F(kHz)@300m	20lg(24000000/F(kHz))	Quasi-peak Level
0.490MHz~1.705MHz	24000/F(kHz)@30m	20lg(2400000/F(kHz))	Quasi-peak Level
1.705MHz~30.0MHz	30@30m	69.54	Quasi-peak Level
30MHz-88MHz	100@3m	40.0	Quasi-peak Level
88MHz-216MHz	150@3m	43.5	Quasi-peak Level
216MHz-960MHz	200@3m	46.0	Quasi-peak Level
960MHz-1GHz	500@3m	54.0	Quasi-peak Level
Above 1GHz	500@3m	54.0	Average Level
	5000@3m	74.0	Peak Level

Spurious Radiated Emissions are permitted in any of the frequency bands listed below:

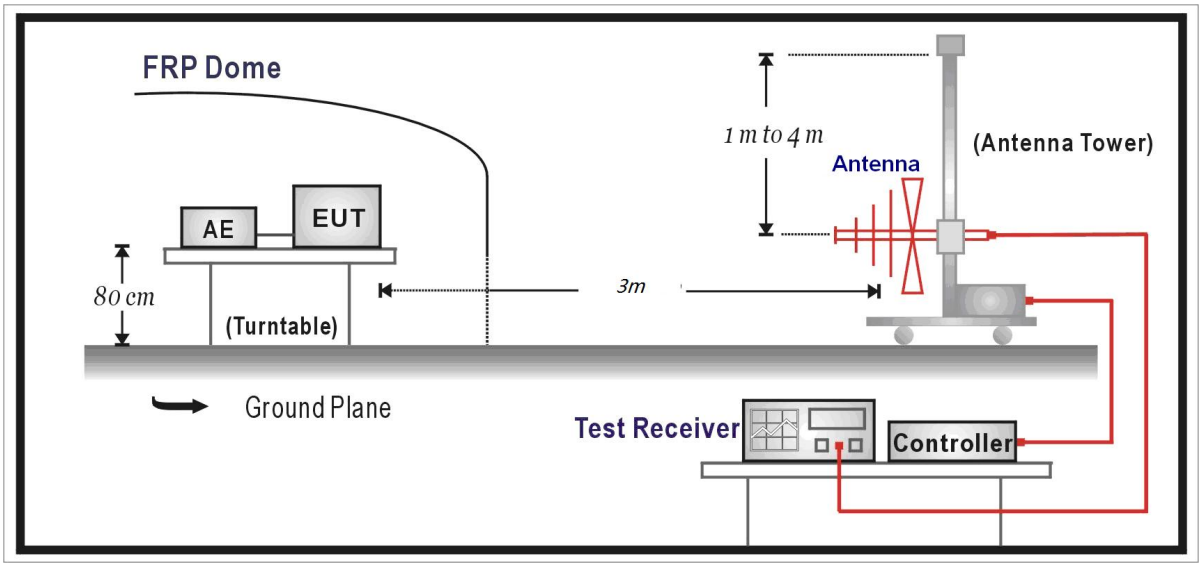
MHz	MHz	MHz	GHz
0.090-0.110	16.42-16.423	399.9-410	4.5-5.15
0.495-0.505	16.69475-16.69525	608-614	5.35-5.46
2.1735-2.1905	16.80425-16.80475	960-1240	7.25-7.75
4.125-4.128	25.5-25.67	1300-1427	8.025-8.5
4.17725-4.17775	37.5-38.25	1435-1626.5	9.0-9.2
4.20725-4.20775	73-74.6	1645.5-1646.5	9.3-9.5
6.215-6.218	74.8-75.2	1660-1710	10.6-12.7
6.26775-6.26825	108-121.94	1718.8-1722.2	13.25-13.4
6.31175-6.31225	123-138	2200-2300	14.47-14.5
8.291-8.294	149.9-150.05	2310-2390	15.35-16.2
8.362-8.366	156.52475-156.52525	2483.5-2500	17.7-21.4
8.37625-8.38675	156.7-156.9	2690-2900	22.01-23.12
8.41425-8.41475	162.0125-167.17	3260-3267	23.6-24.0
12.29-12.293	167.72-173.2	3332-3339	31.2-31.8
12.51975-12.52025	240-285	3345.8-3358	36.43-36.
12.57675-12.57725	322-335.4	3600-4400	/
13.36-13.41	/	/	/

Test Setup:

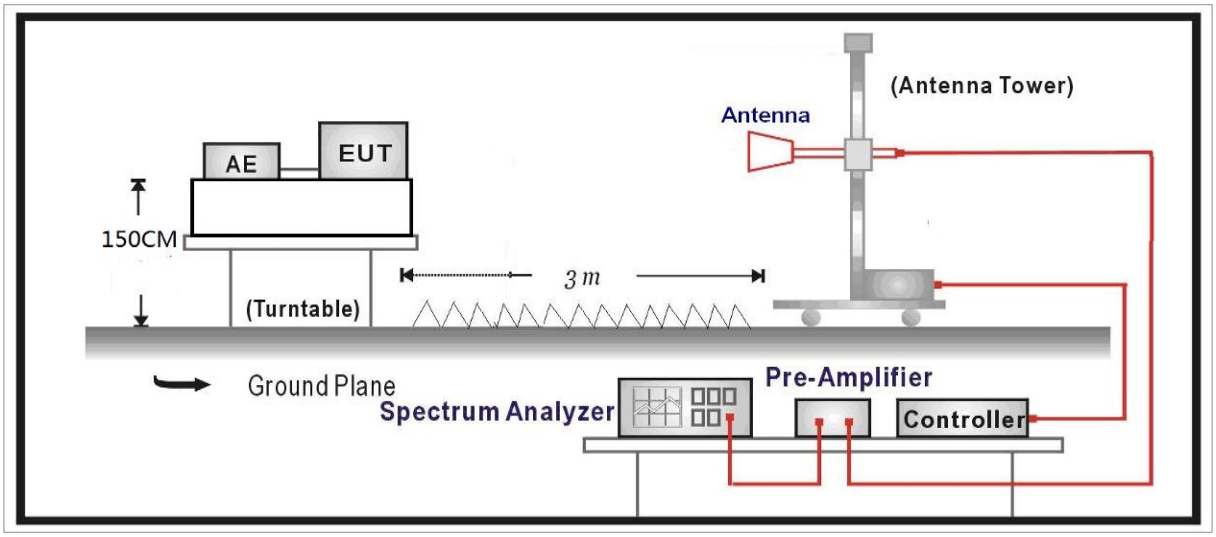
Below 30MHz Test Setup:



Below 1GHz Test Setup:



Above 1GHz Test Setup:



Measurement Data：

The field strength is calculated by adding the Antenna Factor, Cable Factor & Preamplifier. The basic equation with a sample calculation is as follows:

Final Level =Reading - Factor

Factor = Preamplifier Factor – Antenna Factor–Cable Loss

Measurement Uncertainty：

The assessed measurement uncertainty to ensure 95% confidence level for the normal distribution is with the coverage factor k = 1.96.

Frequency	Uncertainty
9KHz-30MHz	3.55 dB
30MHz-200MHz	4.19 dB
200MHz-1GHz	3.63 dB
Above 1GHz	3.68 dB

Test Results:

SPURIOUS EMISSIONS：

WIFI:

During the test, the Radiates Emission from 9kHz to 40GHz was performed in WIFI all modes with all channels and all antennas. 802.11n20, Channel 1, Antenna 1 are selected as the worst condition. The test data of the worst-case condition was recorded in this report.

Radiates Emission	9k~1G
Test channel	Worst-Case

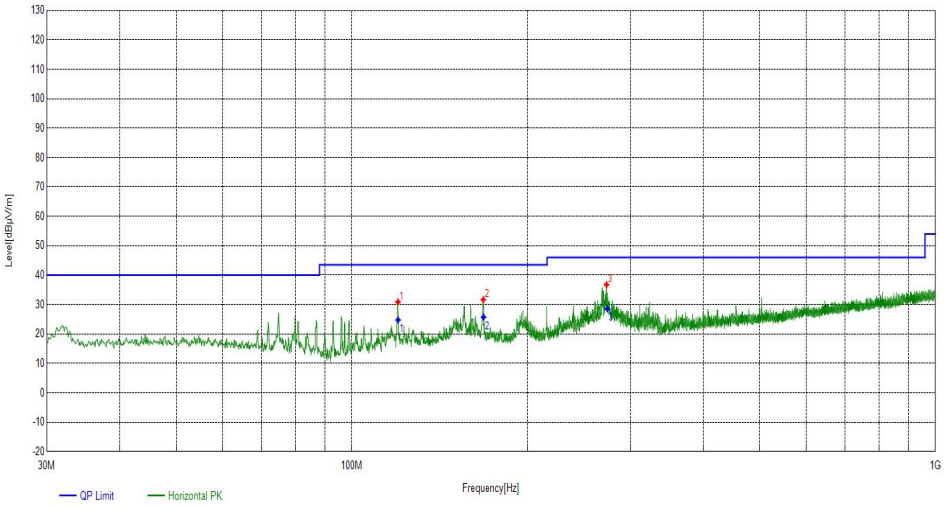
Suspected List

Frequency [MHz]	Polarity	Factor [dB]	Reading [dBμV/m]	Level [dBμV/m]	Limit [dBμV/m]	Margin [dB]	Detector	Height [cm]	Angle deg	Pass/Fail
119.928	Horizontal	18.37	12.51	30.88	43.50	12.62	PK	100	190	PASS
167.9478	Horizontal	20.59	11.07	31.66	43.50	11.84	PK	100	308	PASS
273.1063	Horizontal	20.39	16.36	36.75	46.00	9.25	PK	100	249	PASS

Note: 9kHz~30MHz have been test and test data more than 20dB margin.

Final Data List

Frequency [MHz]	Polarity	Factor [dB]	QP Value [dBμV/m]	QP Limit [dBμV/m]	QP Margin [dB]	Height [cm]	Angle [°]	Pass/Fail
119.9784	Horizontal	18.37	24.76	43.50	18.74	270	195	PASS
168.1228	Horizontal	20.59	25.70	43.50	17.80	160	313	PASS
274.0233	Horizontal	20.39	28.53	46.00	17.47	270	254	PASS



Radiates Emission	9k~1G
Test channel	Worst-Case

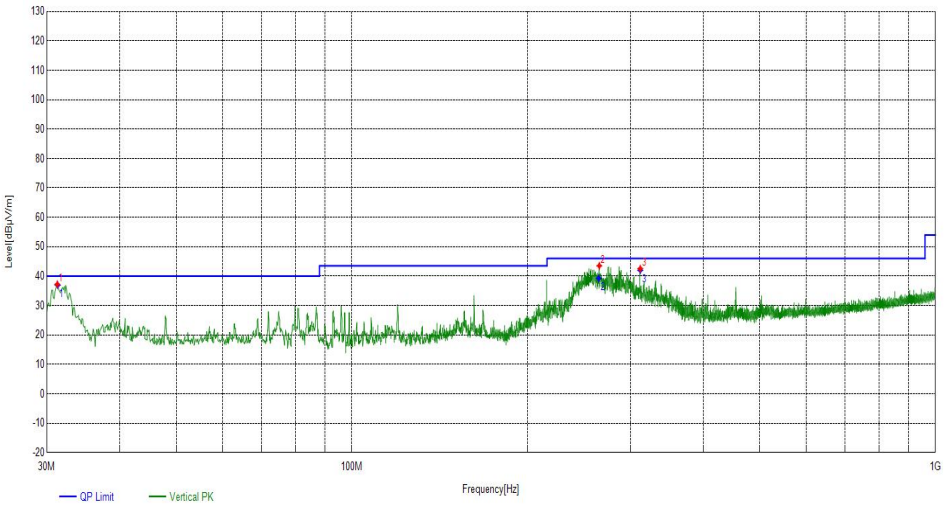
Suspected List

Frequency [MHz]	Polarity	Factor [dB]	Reading [dBμV/m]	Level [dBμV/m]	Limit [dBμV/m]	Margin [dB]	Detector	Height [cm]	Angle deg	Pass/Fail
31.2611	Vertical	18.66	18.57	37.23	40.00	2.77	PK	100	1	PASS
265.4425	Vertical	20.08	23.44	43.52	46.00	2.48	PK	100	14	PASS
312.0072	Vertical	21.79	20.77	42.56	46.00	3.44	PK	100	1	PASS

Note: 9kHz~30MHz have been test and test data more than 20dB margin.

Final Data List

Frequency [MHz]	Polarity	Factor [dB]	QP Value [dBμV/m]	QP Limit [dBμV/m]	QP Margin [dB]	Height [cm]	Angle [°]	Pass/Fail
31.314	Vertical	18.66	36.93	40.00	3.07	130	141	PASS
264.8586	Vertical	20.08	39.25	46.00	6.75	280	18	PASS
312.0027	Vertical	21.79	42.01	46.00	3.99	110	83	PASS



Radiates Emission	Above 1G
Test channel	2412
polarization	Horizontal

Suspected List

Frequency [MHz]	Factor [dB]	Reading [dBμV/m]	Level [dBμV/m]	Limit [dBμV/m]	Margin [dB]	Detect or	Height [cm]	Pass/ Fail
1327.833	29.66	11.94	41.60	74.00	32.40	PK	150	PASS
2089.709	30.93	7.55	38.48	74.00	35.52	PK	150	PASS
2390.139	32.06	18.15	50.21	74.00	23.79	PK	150	PASS
1379.438	29.85	2.11	31.96	54.00	22.04	AV	150	PASS
2088.309	30.92	2.34	33.26	54.00	20.74	AV	150	PASS
2390.139	32.06	3.42	35.48	54.00	18.52	AV	150	PASS

Note: The emission levels of other frequencies were greater than 20dB margin.

Radiates Emission	Above 1G
Test channel	2412
polarization	Vertical

Suspected List

Frequency [MHz]	Factor [dB]	Reading [dBμV/m]	Level [dBμV/m]	Limit [dBμV/m]	Margin [dB]	Detect or	Height [cm]	Pass/ Fail
1356.836	29.76	8.10	37.86	74.00	36.14	PK	150	PASS
2052.705	30.80	9.71	40.51	74.00	33.49	PK	150	PASS
2361.336	31.95	10.17	42.12	74.00	31.88	PK	150	PASS
1348.635	29.74	2.92	32.66	54.00	21.34	AV	150	PASS
2055.306	30.80	2.25	33.05	54.00	20.95	AV	150	PASS
2359.136	31.94	2.10	34.04	54.00	19.96	AV	150	PASS

Note: The emission levels of other frequencies were greater than 20dB margin.

Radiates Emission	Above 1G
Test channel	2437
polarization	Horizontal

Suspected List

Frequency [MHz]	Factor [dB]	Reading [dBμV/m]	Level [dBμV/m]	Limit [dBμV/m]	Margin [dB]	Detect or	Height [cm]	Pass/ Fail
1430.243	30.03	9.90	39.93	74.00	34.07	PK	150	PASS
1781.078	30.77	9.34	40.11	74.00	33.89	PK	150	PASS
2033.103	30.72	9.05	39.77	74.00	34.23	PK	150	PASS
1415.242	29.98	2.67	32.65	54.00	21.35	AV	150	PASS
1827.283	30.78	3.64	34.42	54.00	19.58	AV	150	PASS
2032.303	30.71	3.33	34.04	54.00	19.96	AV	150	PASS

Note: The emission levels of other frequencies were greater than 20dB margin.

Radiates Emission	Above 1G
Test channel	2437
polarization	Vertical

Suspected List

Frequency [MHz]	Factor [dB]	Reading [dBμV/m]	Level [dBμV/m]	Limit [dBμV/m]	Margin [dB]	Detect or	Height [cm]	Pass/ Fail
1214.821	29.27	8.65	37.92	74.00	36.08	PK	150	PASS
1342.234	29.72	9.38	39.10	74.00	34.90	PK	150	PASS
2065.907	30.84	9.63	40.47	74.00	33.53	PK	150	PASS
1213.421	29.27	0.75	30.02	54.00	23.98	AV	150	PASS
1355.836	29.76	1.55	31.31	54.00	22.69	AV	150	PASS
2061.906	30.83	2.98	33.81	54.00	20.19	AV	150	PASS

Note: The emission levels of other frequencies were greater than 20dB margin.

Radiates Emission	Above 1G
Test channel	2462
polarization	Horizontal

Suspected List

Frequency [MHz]	Factor [dB]	Reading [dBμV/m]	Level [dBμV/m]	Limit [dBμV/m]	Margin [dB]	Detect or	Height [cm]	Pass/ Fail
1333.233	29.68	12.85	42.53	74.00	31.47	PK	150	PASS
2052.705	30.80	8.89	39.69	74.00	34.31	PK	150	PASS
2545.155	32.63	10.42	43.05	74.00	30.95	PK	150	PASS
1314.031	29.62	-0.36	29.26	54.00	24.74	AV	150	PASS
2056.106	30.80	-0.30	30.50	54.00	23.50	AV	150	PASS
2545.155	32.63	-0.62	32.01	54.00	21.99	AV	150	PASS

Note: The emission levels of other frequencies were greater than 20dB margin.

Radiates Emission	Above 1G
Test channel	2462
polarization	Vertical

Suspected List

Frequency [MHz]	Factor [dB]	Reading [dBμV/m]	Level [dBμV/m]	Limit [dBμV/m]	Margin [dB]	Detect or	Height [cm]	Pass/ Fail
1208.421	29.25	8.76	38.01	74.00	35.99	PK	150	PASS
2059.706	30.81	8.98	39.79	74.00	34.21	PK	150	PASS
2705.971	33.28	9.04	42.32	74.00	31.68	PK	150	PASS
1179.218	29.11	1.87	30.98	54.00	23.02	AV	150	PASS
2042.104	30.76	3.36	34.12	54.00	19.88	AV	150	PASS
2710.971	33.30	3.59	36.89	54.00	17.11	AV	150	PASS

Note: The emission levels of other frequencies were greater than 20dB margin.

Bluetooth(Low Energy):

During the test, the Radiates Emission from 9kHz to 40GHz was performed in Bluetooth(Low Energy) all modes with all channels and all antennas. BLE(1Mbps), channel 0, antenna 1 are selected as the worst condition. The test data of the worst-case condition was recorded in this report.

Radiates Emission	9k~1G
Test channel	Worst-Case

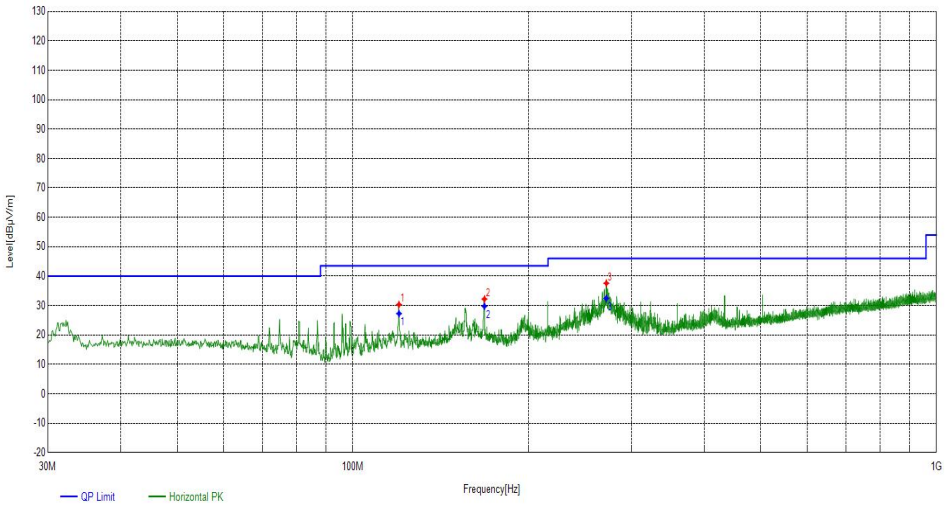
Suspected List

Frequency [MHz]	Polarity	Factor [dB]	Reading [dBµV/m]	Level [dBµV/m]	Limit [dBµV/m]	Margin [dB]	Detector	Height [cm]	Angle deg	Pass/Fail
119.928	Horizontal	18.37	11.95	30.32	43.50	13.18	PK	100	190	PASS
168.0448	Horizontal	20.58	11.63	32.21	43.50	11.29	PK	100	301	PASS
271.8452	Horizontal	20.33	17.26	37.59	46.00	8.41	PK	100	262	PASS

Note: 9kHz~30MHz have been test and test data more than 20dB margin.

Final Data List

Frequency [MHz]	Polarity	Factor [dB]	QP Value [dBµV/m]	QP Limit [dBµV/m]	QP Margin [dB]	Height [cm]	Angle [°]	Pass/Fail
119.9628	Horizontal	18.37	27.27	43.50	16.23	250	195	PASS
168.0205	Horizontal	20.58	29.77	43.50	13.73	160	303	PASS
271.8059	Horizontal	20.33	32.44	46.00	13.56	120	266	PASS



Radiates Emission	9k~1G
Test channel	Worst-Case

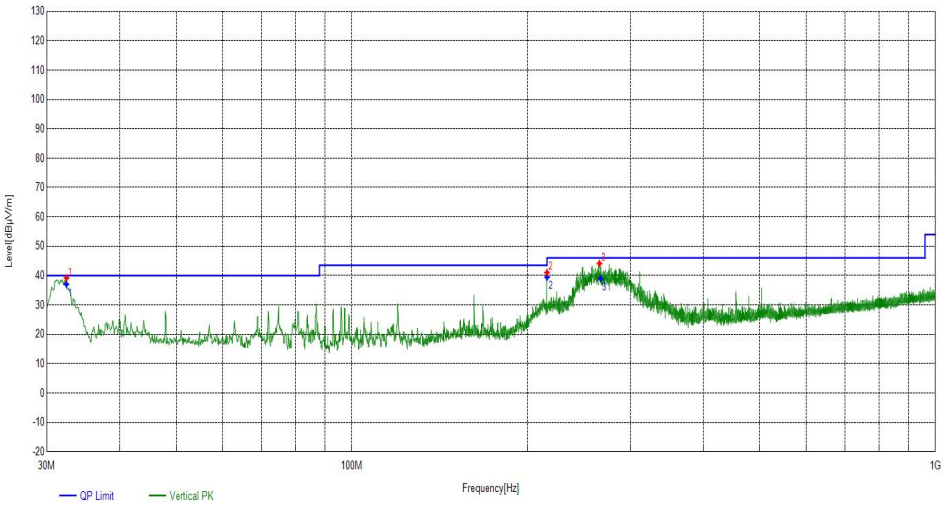
Suspected List

Frequency [MHz]	Polarity	Factor [dB]	Reading [dBµV/m]	Level [dBµV/m]	Limit [dBµV/m]	Margin [dB]	Detector	Height [cm]	Angle deg	Pass/Fail
32.4252	Vertical	18.90	20.26	39.16	40.00	0.84	PK	100	66	PASS
215.9676	Vertical	18.03	23.02	41.05	43.50	2.45	PK	100	66	PASS
265.6366	Vertical	20.09	24.04	44.13	46.00	1.87	PK	100	66	PASS

Note: 9kHz~30MHz have been test and test data more than 20dB margin.

Final Data List

Frequency [MHz]	Polarity	Factor [dB]	QP Value [dBµV/m]	QP Limit [dBµV/m]	QP Margin [dB]	Height [cm]	Angle [°]	Pass/Fail
32.4017	Vertical	18.90	37.07	40.00	2.93	240	68	PASS
215.9833	Vertical	18.03	39.46	43.50	4.04	160	68	PASS
266.8091	Vertical	20.09	38.98	46.00	7.02	250	65	PASS



Radiates Emission	Above 1G
Test channel	2402
polarization	Horizontal

Suspected List

Frequency [MHz]	Factor [dB]	Reading [dBμV/m]	Level [dBμV/m]	Limit [dBμV/m]	Margin [dB]	Detect or	Height [cm]	Pass/ Fail
4804.680	1.25	53.78	55.03	74.00	18.97	PK	150	PASS
6004.800	5.70	39.20	44.90	74.00	29.10	PK	150	PASS
7204.920	9.01	40.35	49.36	74.00	24.64	PK	150	PASS
4806.181	1.27	46.01	47.28	54.00	6.72	AV	150	PASS
6006.301	5.70	31.29	36.99	54.00	17.01	AV	150	PASS
7207.921	9.00	31.66	40.66	54.00	13.34	AV	150	PASS

Note: The emission levels of other frequencies were greater than 20dB margin.

Radiates Emission	Above 1G
Test channel	2402
polarization	Vertical

Suspected List

Frequency [MHz]	Factor [dB]	Reading [dBμV/m]	Level [dBμV/m]	Limit [dBμV/m]	Margin [dB]	Detect or	Height [cm]	Pass/ Fail
4803.180	1.25	55.98	57.23	74.00	16.77	PK	150	PASS
6004.800	5.70	40.60	46.30	74.00	27.70	PK	150	PASS
7204.920	9.01	47.20	56.21	74.00	17.79	PK	150	PASS
4806.181	1.27	48.47	49.74	54.00	4.26	AV	150	PASS
6006.301	5.70	33.24	38.94	54.00	15.06	AV	150	PASS
7207.921	9.00	40.29	49.29	54.00	4.71	AV	150	PASS

Note: The emission levels of other frequencies were greater than 20dB margin.

Radiates Emission	Above 1G
Test channel	2440
polarization	Horizontal

Suspected List

Frequency [MHz]	Factor [dB]	Reading [dBμV/m]	Level [dBμV/m]	Limit [dBμV/m]	Margin [dB]	Detect or	Height [cm]	Pass/ Fail
4879.688	1.58	51.22	52.80	74.00	21.20	PK	150	PASS
6099.310	5.82	37.09	42.91	74.00	31.09	PK	150	PASS
7320.432	8.99	41.17	50.16	74.00	23.84	PK	150	PASS
4881.188	1.59	43.86	45.45	54.00	8.55	AV	150	PASS
6100.810	5.82	28.64	34.46	54.00	19.54	AV	150	PASS
7321.932	8.99	33.99	42.98	54.00	11.02	AV	150	PASS

Note: The emission levels of other frequencies were greater than 20dB margin.

Radiates Emission	Above 1G
Test channel	2440
polarization	Vertical

Suspected List

Frequency [MHz]	Factor [dB]	Reading [dBμV/m]	Level [dBμV/m]	Limit [dBμV/m]	Margin [dB]	Detect or	Height [cm]	Pass/ Fail
4881.188	1.59	57.92	59.51	74.00	14.49	PK	150	PASS
6100.810	5.82	40.29	46.11	74.00	27.89	PK	150	PASS
7320.432	8.99	46.79	55.78	74.00	18.22	PK	150	PASS
4881.188	1.59	51.17	52.76	54.00	1.24	AV	150	PASS
6100.810	5.82	30.81	36.63	54.00	17.37	AV	150	PASS
7321.932	8.99	39.73	48.72	54.00	5.28	AV	150	PASS

Note: The emission levels of other frequencies were greater than 20dB margin.

Radiates Emission	Above 1G
Test channel	2480
polarization	Horizontal

Suspected List

Frequency [MHz]	Factor [dB]	Reading [dBμV/m]	Level [dBμV/m]	Limit [dBμV/m]	Margin [dB]	Detect or	Height [cm]	Pass/ Fail
3720.072	0.01	41.54	41.55	74.00	32.45	PK	150	PASS
4959.196	1.92	49.64	51.56	74.00	22.44	PK	150	PASS
7440.444	9.00	41.55	50.55	74.00	23.45	PK	150	PASS
3721.572	0.01	31.93	31.94	54.00	22.06	AV	150	PASS
4960.696	1.92	40.60	42.52	54.00	11.48	AV	150	PASS
7441.944	9.01	33.60	42.61	54.00	11.39	AV	150	PASS

Note: The emission levels of other frequencies were greater than 20dB margin.

Radiates Emission	Above 1G
Test channel	2480
polarization	Vertical

Suspected List

Frequency [MHz]	Factor [dB]	Reading [dBμV/m]	Level [dBμV/m]	Limit [dBμV/m]	Margin [dB]	Detect or	Height [cm]	Pass/ Fail
4959.196	1.92	56.82	58.74	74.00	15.26	PK	150	PASS
6199.820	5.95	39.43	45.38	74.00	28.62	PK	150	PASS
7440.444	9.00	45.27	54.27	74.00	19.73	PK	150	PASS
4962.196	1.92	50.11	52.03	54.00	1.97	AV	150	PASS
6201.320	5.95	33.39	39.34	54.00	14.66	AV	150	PASS
7441.944	9.01	37.51	46.52	54.00	7.48	AV	150	PASS

Note: The emission levels of other frequencies were greater than 20dB margin.

Band Edge：

During the test, the Band Edge was performed in WIFI all modes with all channels and all antennas. 802.11n20, Antenna1 are selected as the worst condition. The test data of the worst-case condition was recorded in this report.

Test mode	802.11n20
Test channel	Lowest channel
polarization	Horizontal

Suspected List

Frequency [MHz]	Factor [dB]	Reading [dBμV/m]	Level [dBμV/m]	Limit [dBμV/m]	Margin [dB]	Detector	Height [cm]	Angle deg	Pass/ Fail
2285.328	31.65	9.35	41.00	74.00	33.00	PK	150	322	PASS
2390.139	32.06	18.15	50.21	74.00	23.79	PK	150	40	PASS
2415.741	32.15	56.56	88.71	74.00	-14.71	PK	150	139	---
2302.930	31.73	-1.34	30.39	54.00	23.61	AV	150	12	PASS
2390.139	32.06	3.42	35.48	54.00	18.52	AV	150	358	PASS
2407.740	32.12	46.34	78.46	54.00	-24.46	AV	150	97	---

Test mode	802.11n20
Test channel	Lowest channel
polarization	Vertical

Suspected List

Frequency [MHz]	Factor [dB]	Reading [dBμV/m]	Level [dBμV/m]	Limit [dBμV/m]	Margin [dB]	Detector	Height [cm]	Angle deg	Pass/ Fail
2361.336	31.95	10.17	42.12	74.00	31.88	PK	150	55	PASS
2390.139	32.06	17.61	49.67	74.00	24.33	PK	150	359	PASS
2404.340	32.11	53.76	85.87	74.00	-11.87	PK	150	140	---
2359.135	31.94	2.10	34.04	54.00	19.96	AV	150	55	PASS
2390.139	32.06	3.16	35.22	54.00	18.78	AV	150	41	PASS
2406.940	32.12	39.36	71.48	54.00	-17.48	AV	150	98	---

Test mode	802.11n20
Test channel	Highest channel
polarization	Horizontal

Suspected List

Frequency [MHz]	Factor [dB]	Reading [dBµV/m]	Level [dBµV/m]	Limit [dBµV/m]	Margin [dB]	Detector	Height [cm]	Angle deg	Pass/ Fail
2454.945	32.28	55.29	87.57	74.00	-13.57	PK	150	42	---
2483.548	32.38	17.73	50.11	74.00	23.89	PK	150	57	PASS
2545.154	32.63	10.42	43.05	74.00	30.95	PK	150	57	PASS
2464.146	32.31	30.22	62.53	54.00	-8.53	AV	150	57	---
2483.548	32.38	3.20	35.58	54.00	18.42	AV	150	226	PASS
2545.154	32.63	-0.62	32.01	54.00	21.99	AV	150	57	PASS

Test mode	802.11n20
Test channel	Highest channel
polarization	Vertical

Suspected List

Frequency [MHz]	Factor [dB]	Reading [dBµV/m]	Level [dBµV/m]	Limit [dBµV/m]	Margin [dB]	Detector	Height [cm]	Angle deg	Pass/ Fail
2458.145	32.29	58.38	90.67	74.00	-16.67	PK	150	68	---
2483.548	32.38	22.45	54.83	74.00	19.17	PK	150	350	PASS
2579.757	32.77	10.42	43.19	74.00	30.81	PK	150	40	PASS
2464.746	32.32	30.88	63.20	54.00	-9.20	AV	150	223	---
2483.548	32.38	5.68	38.06	54.00	15.94	AV	150	237	PASS
2594.159	32.83	4.63	37.46	54.00	16.54	AV	150	237	PASS

During the test, the Band Edge was performed in BLE all modes with all channels and all antennas. BLE(1Mbps), Antenna 1 are selected as the worst condition. The test data of the worst-case condition was recorded in this report.

Test mode	BLE(1Mbps)
Test channel	Lowest channel
polarization	Horizontal

Suspected List

Frequency [MHz]	Factor [dB]	Reading [dBµV/m]	Level [dBµV/m]	Limit [dBµV/m]	Margin [dB]	Detector	Height [cm]	Angle deg	Pass/ Fail
2335.333	31.84	10.94	42.78	74.00	31.22	PK	150	3	PASS
2390.139	32.06	8.22	40.28	74.00	33.72	PK	150	99	PASS
2402.140	32.10	70.01	102.11	74.00	-28.11	PK	150	296	---
2333.733	31.84	-0.27	31.57	54.00	22.43	AV	150	14	PASS
2390.139	32.06	0.00	32.06	54.00	21.94	AV	150	240	PASS
2402.140	32.10	67.40	99.50	54.00	-45.50	AV	150	28	---

Test mode	BLE(1Mbps)
Test channel	Lowest channel
polarization	Vertical

Suspected List

Frequency [MHz]	Factor [dB]	Reading [dBµV/m]	Level [dBµV/m]	Limit [dBµV/m]	Margin [dB]	Detector	Height [cm]	Angle deg	Pass/ Fail
2362.336	31.95	10.45	42.40	74.00	31.60	PK	150	147	PASS
2390.139	32.06	9.44	41.50	74.00	32.50	PK	150	76	PASS
2402.140	32.10	68.89	100.99	74.00	-26.99	PK	150	218	---
2362.136	31.95	6.14	38.09	54.00	15.91	AV	150	176	PASS
2390.139	32.06	0.17	32.23	54.00	21.77	AV	150	204	PASS
2402.140	32.10	66.01	98.11	54.00	-44.11	AV	150	302	---

Test mode	BLE(1Mbps)
Test channel	Highest channel
polarization	Horizontal

Suspected List

Frequency [MHz]	Factor [dB]	Reading [dBµV/m]	Level [dBµV/m]	Limit [dBµV/m]	Margin [dB]	Detect or	Height [cm]	Angle deg	Pass/ Fail
2480.148	32.37	66.60	98.97	74.00	-24.97	PK	150	318	---
2483.548	32.38	10.03	42.41	74.00	31.59	PK	150	90	PASS
2515.151	32.51	9.71	42.22	74.00	31.78	PK	150	133	PASS
2480.348	32.37	65.53	97.90	54.00	-43.90	AV	150	318	---
2483.548	32.38	2.46	34.84	54.00	19.16	AV	150	318	PASS
2512.351	32.49	4.03	36.52	54.00	17.48	AV	150	104	PASS

Test mode	BLE(1Mbps)
Test channel	Highest channel
polarization	Vertical

Suspected List

Frequency [MHz]	Factor [dB]	Reading [dBµV/m]	Level [dBµV/m]	Limit [dBµV/m]	Margin [dB]	Detect or	Height [cm]	Angle deg	Pass/ Fail
2480.148	32.37	65.11	97.48	74.00	-23.48	PK	150	128	---
2483.548	32.38	9.43	41.81	74.00	32.19	PK	150	360	PASS
2534.153	32.58	10.47	43.05	74.00	30.95	PK	150	128	PASS
2480.148	32.37	63.82	96.19	54.00	-42.19	AV	150	128	---
2483.548	32.38	1.84	34.22	54.00	19.78	AV	150	128	PASS
2504.150	32.46	2.83	35.29	54.00	18.71	AV	150	143	PASS

5.3 Maximum conducted output power

Ambient condition:

Temperature	Relative humidity	Pressure
23°C ~25°C	45%~50%	101.2kPa

Method of Measurement:

The EUT was tested according to DTS test procedure of ANSI C63.10 for compliance to FCC 47CFR 15.247 requirements. The maximum conducted output power using ANSI C63.10 section 11.9.2.3 AVGPM Average power meter method.

1. Power meter and sensor's minimum video bandwidth is 50MHz, larger than 802.11n(40MHz) bandwidth;
2. Fast responding diode sensors respond immediately to changes in power level to reduce total test time.
3. Use average detector to test.

During the process of the testing, The EUT was connected to Spectrum Analyzer with a known loss. The EUT is max power transmission with proper modulation. The Average detector is used. We use Maximum Average Conducted Output Power Level Method AVGSA-2 in KDB 558074 D01 /KDB662911 D01 for this test.

The conducted Power is measured at each antenna port. The measured results at the various antenna ports are then summed mathematically.

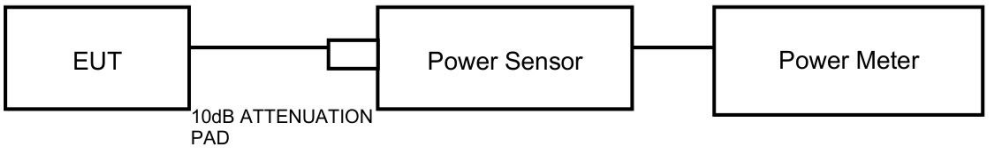
Limits:

Average Output Power	≤ 1W (30dBm)

Note: the conducted output power limit specified above is based on the use the antennas with directional gains that do not exceed 6 dBi are used, the conducted output power from the intentional radiator shall be reduced below the stated Levels above, as appropriate, by the amount in dB that the directional gain of antenna exceeds 6 dBi.

Systems operating in the 2400-2483.5 MHz band that are used exclusively for fixed, point-to-point operations may employ transmitting antennas with directional gain greater than 6 dBi provided the maximum conducted output power of the intentional radiator is reduced by 1 dB for every 3 dB that the directional gain of the antenna exceeds 6 dBi.

Test Setup:



Measurement Uncertainty：

The assessed measurement uncertainty to ensure 95% confidence level for the normal distribution is with the coverage factor k = 2, U= 0.44 dB.

Test Results:

TestMode	Antenna	Channel	Result[dBm]	Limit[dBm]	Verdict
11B	Ant1	2412	14.21	≤30	PASS
	Ant1	2437	14.43	≤30	PASS
	Ant1	2462	15.08	≤30	PASS
11G	Ant1	2412	19.21	≤30	PASS
	Ant1	2437	18.90	≤30	PASS
	Ant1	2462	19.34	≤30	PASS
11N20SISO	Ant1	2412	19.01	≤30	PASS
	Ant1	2437	19.10	≤30	PASS
	Ant1	2462	19.38	≤30	PASS
BLE_1M	Ant1	2402	21.39	≤30	PASS
	Ant1	2440	20.56	≤30	PASS
	Ant1	2480	18.55	≤30	PASS

5.4 Minimum 6 dB Bandwidth

Ambient condition:

Temperature	Relative humidity	Pressure
23°C ~25°C	45%~50%	101.2kPa

Method of Measurement:

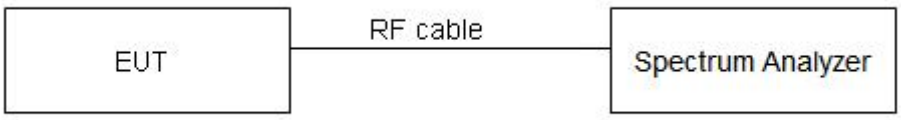
The EUT was connected to the spectrum analyzer through an external attenuator (20dB) and a known loss cable. Set RBW = shall be in the range of 1% to 5% of the OBW but not less than 100 kHz; VBW is set to greater than 3 times RBW on spectrum analyzer.
Detector=Peak, Trace mode=Max hold.

Limits:

Rule Part 15.247 (a) (2) specifies that “Systems using digital modulation techniques may operate in the 902–928 MHz, 2400–2483.5 MHz bands. The minimum 6 dB bandwidth shall be at least 500 kHz.”

Minimum 6dB Bandwidth	≥ 500 kHz

Test Setup:



Measurement Uncertainty：

The assessed measurement uncertainty to ensure 95% confidence level for the normal distribution is with the coverage factor k = 2, U= 936 Hz.

Test Results:

TestMode	Antenna	Channel	DTS BW [MHz]	FL[MHz]	FH[MHz]	Limit[MHz]	Verdict
11B	Ant1	2412	8.52	2408.08	2416.60	≥0.5	PASS
		2437	9.08	2432.52	2441.60	≥0.5	PASS
		2462	9.04	2457.52	2466.56	≥0.5	PASS
11G	Ant1	2412	16.36	2403.88	2420.24	≥0.5	PASS
		2437	16.48	2428.80	2445.28	≥0.5	PASS
		2462	16.40	2453.84	2470.24	≥0.5	PASS
11N20SISO	Ant1	2412	17.44	2403.40	2420.84	≥0.5	PASS
		2437	17.64	2428.24	2445.88	≥0.5	PASS
		2462	17.68	2453.20	2470.88	≥0.5	PASS
BLE_1M	Ant1	2402	0.70	2401.69	2402.40	≥0.5	PASS
		2440	0.76	2439.67	2440.43	≥0.5	PASS
		2480	0.72	2479.69	2480.41	≥0.5	PASS

5.5 Occupied Channel Bandwidth

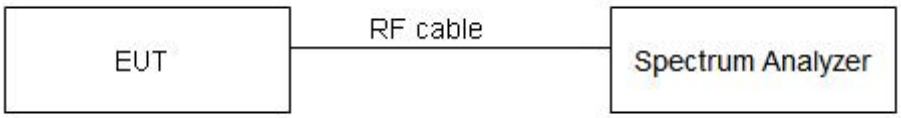
Ambient condition:

Temperature	Relative humidity	Pressure
23°C ~25°C	45%~50%	101.2kPa

Method of Measurement:

The EUT was connected to the spectrum analyzer through an external attenuator (20dB) and a known loss cable. RBW is set to 1% to 5% of the OBW; video bandwidth (VBW) shall be at least three times RBW on spectrum analyzer.
Detector=Peak, Trace mode=Max hold.

Test Setup:



Measurement Uncertainty：

The assessed measurement uncertainty to ensure 95% confidence level for the normal distribution is with the coverage factor k = 2, U= 936 Hz.

Test Results:

TestMode	Antenna	Channel	OCB [MHz]	Limit[MHz]	Verdict
11B	Ant1	2412	13.067	---	---
		2437	13.027	---	---
		2462	13.187	---	---
11G	Ant1	2412	16.903	---	---
		2437	17.023	---	---
		2462	16.983	---	---
11N20SISO	Ant1	2412	18.062	---	---
		2437	18.062	---	---
		2462	18.062	---	---
BLE_1M	Ant1	2402	1.031	---	---
		2440	1.051	---	---
		2480	1.039	---	---

5.6 Band Edge Measurement

Ambient condition:

Temperature	Relative humidity	Pressure
23°C ~25°C	45%~50%	101.2kPa

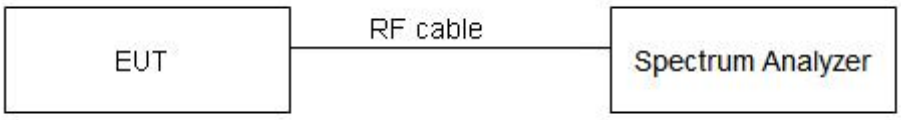
Method of Measurement:

The EUT was connected to the spectrum analyzer through an external attenuator (20dB) and a known loss cable the band edge of the lowest and highest channels were measured. The peak detector is used and RBW is set to 100 kHz and VBW is set to 300 kHz on spectrum analyzer.

Limits:

Rule Part 15.247(d) specifies that “In any 100 kHz bandwidth outside the frequency band in which the spread spectrum or digitally modulated intentional radiator is operating, the radio frequency power that is produced by the intentional radiator shall be at least 20 dB below that in the 100 kHz bandwidth within the band that contains the highest level of the desired power, based on either an RF conducted or a radiated measurement, provided the transmitter demonstrates compliance with the peak conducted power limits.

Test Setup:



Measurement Uncertainty：

The assessed measurement uncertainty to ensure 95% confidence level for the normal distribution is with the coverage factor k = 1.96, U= 936 Hz, 2 GHz-3 GHz = 1.407 dB.

Test Results:

TestMode	Antenna	ChName	Channel	RefLevel[dBm]	Result[dBm]	Limit[dBm]	Verdict
11B	Ant1	Low	2412	2.80	-42.72	≤-17.2	PASS
		High	2462	3.38	-48.94	≤-16.62	PASS
11G	Ant1	Low	2412	-0.78	-36.68	≤-20.78	PASS
		High	2462	0.78	-46.84	≤-19.22	PASS
11N20SISO	Ant1	Low	2412	-0.23	-34.04	≤-20.23	PASS
		High	2462	-1.35	-46.33	≤-21.35	PASS
BLE_1M	Ant1	Low	2402	20.46	-28.29	≤0.46	PASS
		High	2480	17.60	-43.94	≤-2.4	PASS

5.7 Maximum Power Spectral Density

Ambient condition:

Temperature	Relative humidity	Pressure
23°C ~25°C	45%~50%	101.2kPa

Method of Measurement:

During the process of the testing, The EUT was connected to Spectrum Analyzer with a known loss. The EUT is max power transmission with proper modulation. The Average detector is used. We use Method AVGPSD-2 in KDB 558074 D01 for this test.

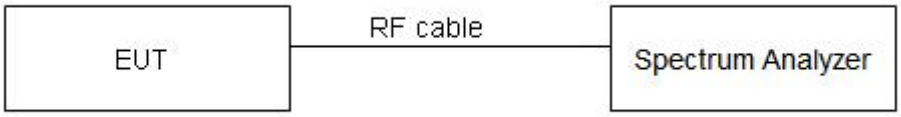
The conducted Power is measured at each antenna port. The measured results at the various antenna ports are then summed mathematically.

Limits:

Rule Part 15.247(e) specifies that" For digitally modulated systems, the power spectral density conducted from the intentional radiator to the antenna shall not be greater than 8 dBm in any 3 kHz band during any time interval of continuous transmission.

Maximum Power Spectral Density	≤ 8 dBm / 3kHz

Test Setup:



Measurement Uncertainty：

The assessed measurement uncertainty to ensure 95% confidence level for the normal distribution is with the coverage factor k = 2, U= 0.75dB.

Test Results:

TestMode	Antenna	Channel	Result[dBm/3kHz]	Limit[dBm/3kHz]	Verdict
11B	Ant1	2412	-10.34	≤8	PASS
		2437	-10.36	≤8	PASS
		2462	-9.68	≤8	PASS
11G	Ant1	2412	-13.77	≤8	PASS
		2437	-13.86	≤8	PASS
		2462	-13.24	≤8	PASS
11N20SISO	Ant1	2412	-14.48	≤8	PASS
		2437	-14.64	≤8	PASS
		2462	-14.20	≤8	PASS
BLE_1M	Ant1	2402	5.45	≤8	PASS
		2440	5.77	≤8	PASS
		2480	3.05	≤8	PASS

5.8 Spurious RF Conducted Emissions

Ambient condition:

Temperature	Relative humidity	Pressure
23°C ~25°C	45%~50%	101.2kPa

Method of Measurement:

The EUT was connected to the spectrum analyzer with a known loss. The spectrum analyzer scans from 30MHz to the 10th harmonic of the carrier. The peak detector is used. Set RBW to100kHz and VBW to 300 kHz, Sweep is set to AUTO .The test is in transmitting mode.

Limits:

Rule Part 15.247(d) pacifies that “In any 100 kHz bandwidth outside the frequency band in which the spread spectrum intentional radiator is operating, the radio frequency power that is produced by the intentional radiator shall be at least 20 dB below that in the 100 kHz bandwidth within the band that contains the highest level of the desired power.

Test Setup:

Measurement Uncertainty：

The assessed measurement uncertainty to ensure 95% confidence level for the normal distribution is with the coverage factor k = 1.96.

Frequency	Uncertainty
100kHz-2GHz	0.684 dB
2GHz-26GHz	1.407 dB

Test Results:

TestMode	Antenna	Channel	FreqRange [Mhz]	RefLevel [dBm]	Result [dBm]	Limit [dBm]	Verdict
11B	Ant1	2412	Reference	-0.65	-0.65	---	PASS
			30~1000	-0.65	-60.22	≤-20.65	PASS
			1000~26500	-0.65	-47.23	≤-20.65	PASS
		2437	Reference	0.23	0.23	---	PASS
			30~1000	0.23	-59.29	≤-19.77	PASS
			1000~26500	0.23	-47.61	≤-19.77	PASS
		2462	Reference	0.30	0.30	---	PASS
			30~1000	0.30	-60.37	≤-19.7	PASS
			1000~26500	0.30	-47.43	≤-19.7	PASS
11G	Ant1	2412	Reference	-4.30	-4.30	---	PASS
			30~1000	-4.30	-60	≤-24.3	PASS
			1000~26500	-4.30	-48.94	≤-24.3	PASS
		2437	Reference	-3.44	-3.44	---	PASS
			30~1000	-3.44	-60.77	≤-23.44	PASS
			1000~26500	-3.44	-48.57	≤-23.44	PASS
		2462	Reference	-2.35	-2.35	---	PASS
			30~1000	-2.35	-49.19	≤-22.35	PASS
			1000~26500	-2.35	-49.05	≤-22.35	PASS
11N20SISO	Ant1	2412	Reference	-3.88	-3.88	---	PASS
			30~1000	-3.88	-59.74	≤-23.88	PASS
			1000~26500	-3.88	-48.94	≤-23.88	PASS
		2437	Reference	-4.28	-4.28	---	PASS
			30~1000	-4.28	-59.77	≤-24.28	PASS
			1000~26500	-4.28	-48.48	≤-24.28	PASS
		2462	Reference	-3.35	-3.35	---	PASS
			30~1000	-3.35	-60.3	≤-23.35	PASS
			1000~26500	-3.35	-49.04	≤-23.35	PASS

TestMode	Antenna	Channel	FreqRange [MHz]	RefLevel [dBm]	Result[dBm]	Limit[dBm]	Verdict
BLE_1M	Ant1	2402	Reference	19.61	19.61	---	PASS
			30~1000	19.61	-60.43	≤-0.39	PASS
			1000~26500	19.61	-35.98	≤-0.39	PASS
		2440	Reference	18.25	18.25	---	PASS
			30~1000	18.25	-55.09	≤-1.75	PASS
			1000~26500	18.25	-36.65	≤-1.75	PASS
		2480	Reference	16.61	16.61	---	PASS
			30~1000	16.61	-60.87	≤-3.39	PASS
			1000~26500	16.61	-41.13	≤-3.39	PASS

6. Appendix X

Test Equipment	Type/Mode	SERIAL NO.	Equipment No.	Manufacturer	Cal. Due
Spectrum Analyzer	FSV40	101580	DZ-000238-3	R&S	2025/04/22
RF Radio Frequency Switch	JS0806-2	19H9080187	DZ-000241	Tonscend	2025/04/27
5m Semi-Anechoic Chamber	SAC-5	SAC-5-2.0	EM-000557	COMTEST	2024/11/02
Spectrum Analyzer	N9010B	MY57470323	DZ-000174	KEYSIGHT	2025/01/02
EMI Test Receiver	N9038A-508	MY532290079	EM-000397	Agilent	2025/01/13
EMI Test Receiver	ESR7	102235	EM-000574	R&S	2025/01/13
loop antenna	HLA 6121	540046	EM-000546	TESEQ	2025/06/04
Broadband Antenna	VULB 9163	9163-530	EM-000342	SCHWARZBECK	2025/06/09
Waveguide Horn Antenna	HF906	360306/008	EM-000093	R&S	2025/01/13
Waveguide Horn Antenna	BBHA9170	00949	DZ-000209-2	SCHWARZBECK	2025/08/05
Preamplifier	BBV 9721	9721-050	DZ-000209-1	SCHWARZBECK	2025/06/03
Bandstop Filters	SW-BSF-2400-100-7-A1	/	EM-000495	/	2024/08/30
5G Bandstop Filters	WRCJV12-4900-5100-5900-6100-50EE	1	DZ-000186	WI	2024/12/03
Preamplifier	BBV 9721	9721-050	DZ-000209-1	SCHWARZBECK	2025/06/03
Temperature and humidity meter	MHO-C201	/	DZ-000249-2	Seconds test	2024/08/30

Dynacomm	Software Release	Software Developer
TS1120-3 Test System(Conduction test)	3.3.38	Tonscend
TS+（5m,Radiation test）	JS32-RE 5.0.0	Tonscend

The End

Important

1. The test report is invalid without the official stamp of CVC;
2. Any part photocopies of the test report are forbidden without the written permission from CVC;
3. The test report is invalid without the signatures of Author and Reviewer;
4. The test report is invalid if altered;
5. Objections to the test report must be submitted to CVC within 15 days;
6. Generally, commission test is responsible for the tested samples only;
7. As for the test result, "—" or " N/A" means "not applicable", " / "means "not testing", "P" means "pass" and "F" means "fail".

Address: No.3,Tiantaiyi Road, Kaitai Avenue, Science City, Guangzhou, China (Test location)
Post Code：510663 Tel：020-32293888
FAX：020 32293889 E-mail：office@cvc.org.cn